



Saturday, March 30th 8:00am - 5:00pm Carteret Community College, Morehead City

In conjunction with CCC's Shuck, Rattle & Roll Saturday Evening Event Event details and registration available online at www.ncaquaculture.org

The NC Aquaculture Development Conference is brought to you through the partnership of the following agencies:















NC Aquaculture Development Conference 31 years of a public/ private partnership

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 - NC Aquaculture Association
 - NCDA&CS
 - NCSU College of Ag & Life Sciences
 - NCSU Department of Applied Ecology
 - NC Small Business Tech. Dev. Center
 - NC Farm Bureau
 - NC Sea Grant
 - NC Shellfish Growers Association

A 'partnership' for NC Aquaculture

- SBTDC Michael Twiddy
- NCDA Ron Fish, John Aydlett
 Pete Anderson
- NCCE Steve Gabel, Mike Frinsko
- Sea Grant Chuck Weirich
- NC Farm Bureau Debbie Hamrick
- NCSU Steve Hall
- NCAA Randy Gray and the NCAA Board

















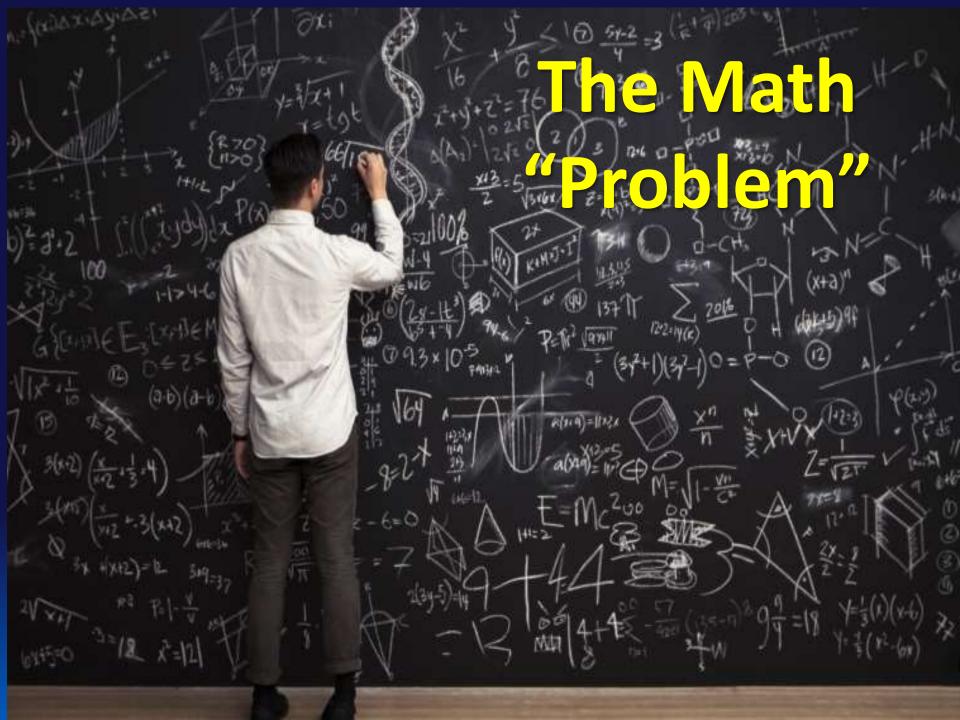


2018 Farm data and Industry statistics from the NC Aquaculture Industry

Thank you to all of the <u>farms</u> and agencies that provided data for this presentation!



For a copy, please see our website: www.ncaquaculture.org



Side by side comparisons

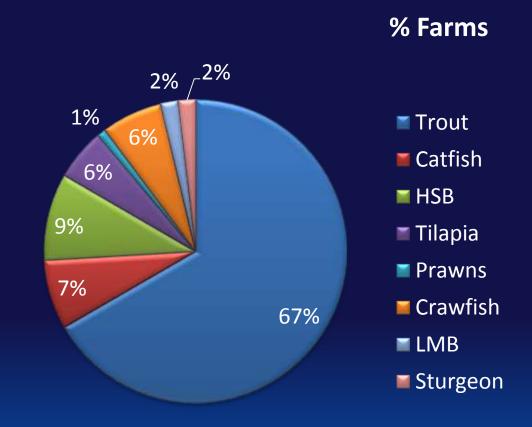
"Work with what ya got..."

•	Farms Reporting •		NCDA Database Numbers	
	Trout	72	– Trout	72
	Catfish	8	Catfish	61
	HS Bass	10	– HSB	30
	LM Bass	2	— Tilapia	52
	– Tilapia	6	– Prawn	13
	Prawns	1		10
	Crawfish	7	Crawfish	12
	– Other	2	Other	63
			– "All"	40
	*TOTAL	108	* TOTAL	342

2018 North Carolina Freshwater Aquaculture

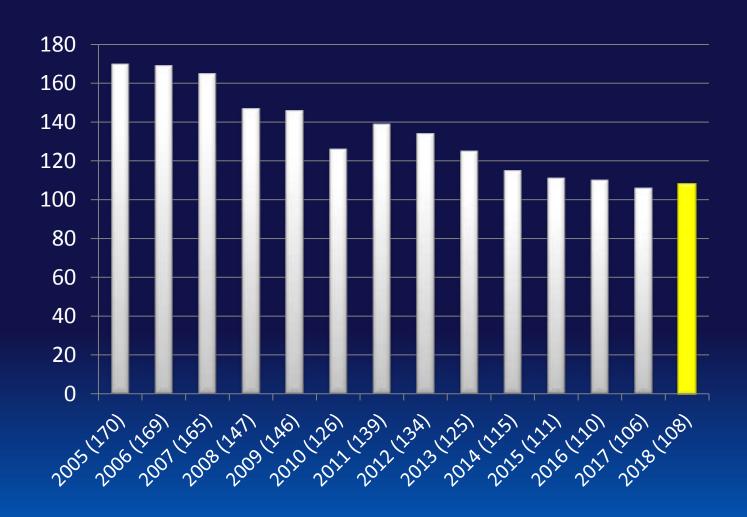
Farms (current number) reporting production in 2018

- 108 farms reporting
 - Trout (72)
 - Catfish (8)
 - Hybrid Striped Bass (10)
 - Tilapia (6)
 - Fresh Water Prawns (1)
 - Crawfish (7)
 - Large Mouth Bass (2)
 - Sturgeon (2)



14 Years of NCADC Surveys

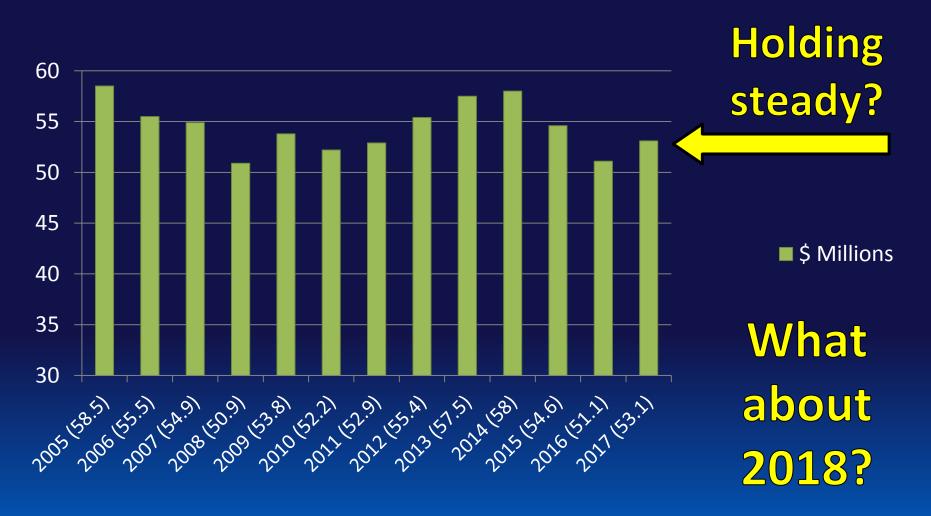
Total number of farms according to NCADC State Update Presentations



Starting a new trend?

14 Years of NCADC Surveys

Total dollar value from the NC Aquaculture Industry according to NCADC State Update Presentations



NCSU & NC Extension

-Harry Daniels: Freshwater Aquaculture Production

NC Sea Grant

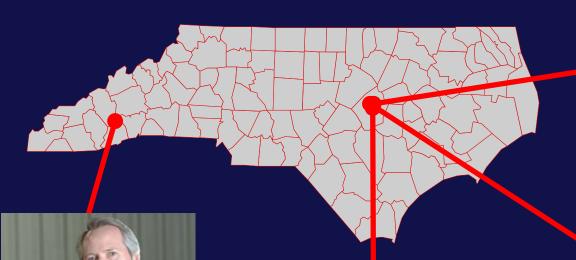
-Chuck Weirich: Marine Aquaculture Production

NCDA&CS

-Ron Fish: Aquaculture Industry Value & Resources

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Aquaculture Research Personnel



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Dr. Harry Daniels NC State, Raleigh



Dr. Ben Reading NC State, Raleigh

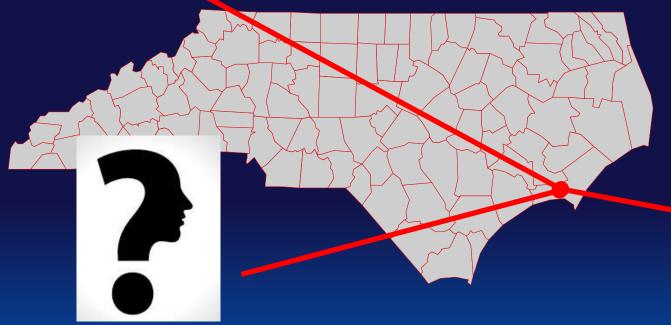


Dr. Wade Watanabe UNC Wilmington

Aquaculture Research Personnel



Center for Marine Science & Technology, NCSU Dr. David Eggleston Professor, Center Director



CMAST, NCSU Seafood Lab

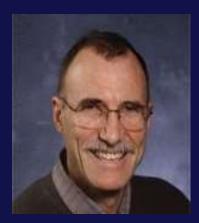


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Dr. Michael Stoskopf



Dr. Jay Levine



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> Mike Frinsko Area Aquaculture Agent (252) 448-9621

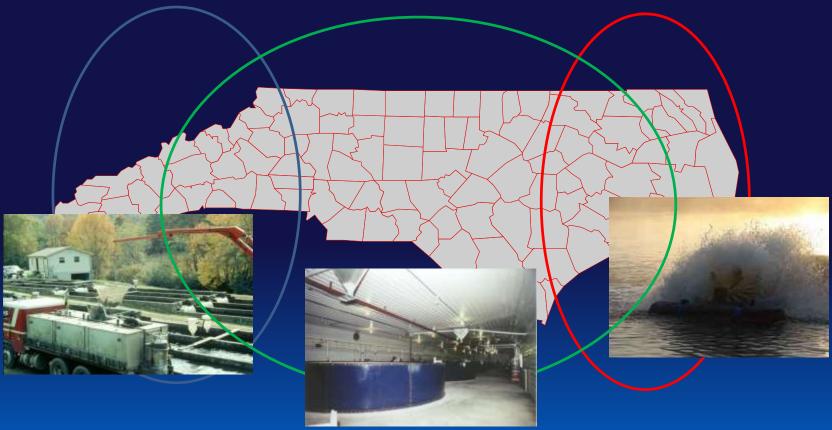


NC Aquaculture - Regional Production

Cool & coldwater Flow-through Tank production

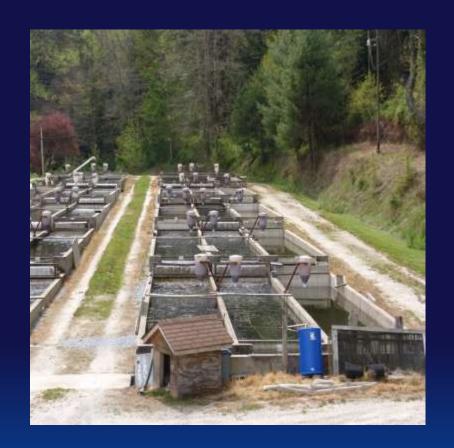
Recirculating tank production

Warmwater pond & marine aquaculture

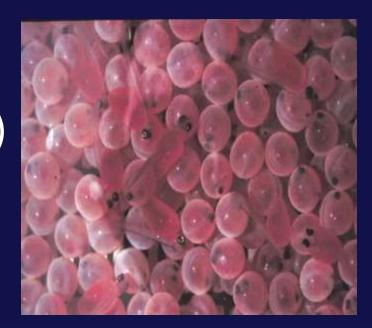


Food fish production
36 producers (+1)
5,040,500 lbs. (+1.2%)
\$1.87/ lbs. (n/c)

Farm gate value=\$9,425,850 (+1.1%)



Fingerling production
16 Hatcheries (n/c)
8,830,500 fingerlings (+4.1%)
\$0.11/ fingerling (n/c)



Farm gate value=\$984,550 (+3.7%)

Fee fishing operations
20 operations (+1)
191,500 lbs. (n/c)
\$5.11/ lb. (-1.2%)

Farm gate value=\$978,900 (-1.1%)



Processing

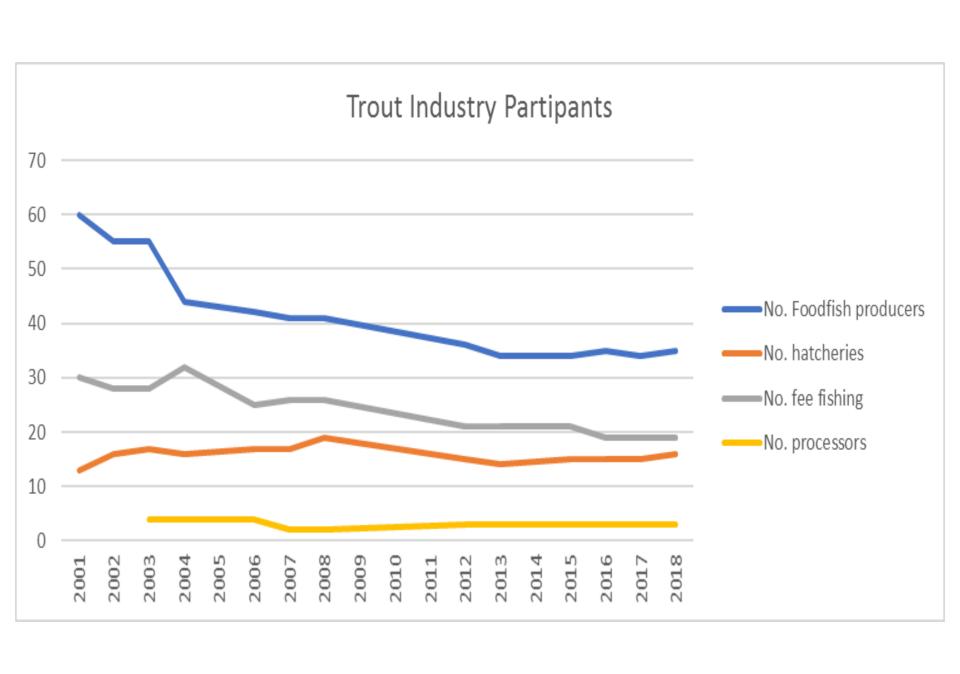
3 processors (n/c)

1,765,000 lbs. (+6.0%)

Avg. price \$6.92/ lb. (-1.4%)



Value= \$12,210,750 (+4.5%)



- Trends
 - Industry remains stable
 - Demand is strong

Total Combined Value
 Farm gate and processing

* \$23,600,050 (+2.9%)

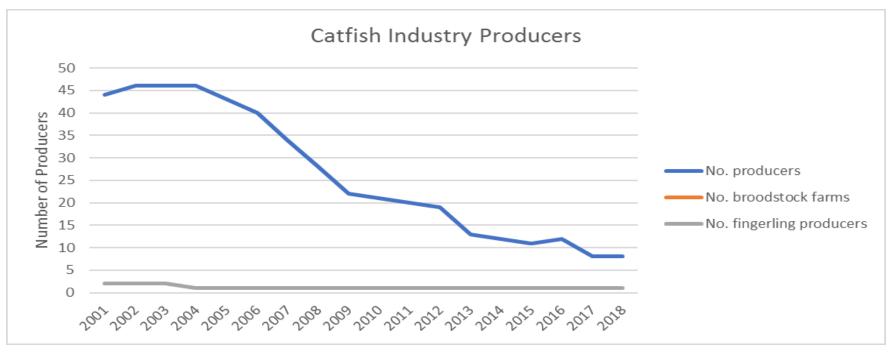


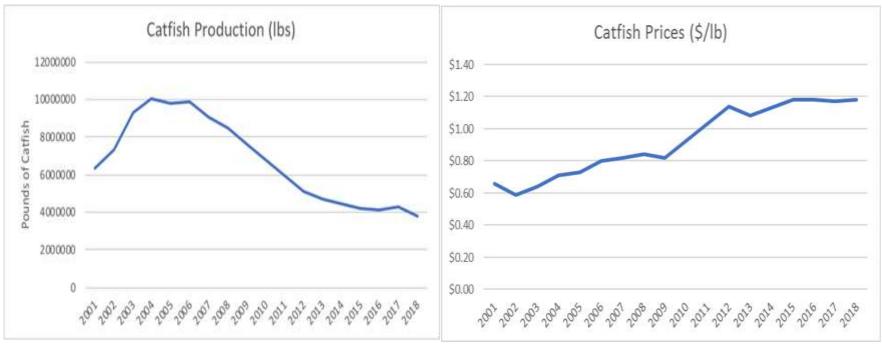
Food fish production
 8 producers (n/c)
 1370 pond acres (n/c)

2,011,391 lbs. (-47.0%) \$1.17/lb. (+\$0.01/lb)



• Farm gate= \$2,353,327 (-47.4%)





Fingerling production
1 producer (n/c)
5,000,000 (+100%)
\$0.12 each (+20%)



Farm gate= \$600,000 (+140%)

Processing

1 Processor (n/c)(Carolina Classic Catfish Inc.)3,096,1900 lbs processed

Processed value

\$6,762,731 (-18.5%)



2018 North Carolina Feeds Production

• 1 Mill – Greenville, NC

Production value= \$2,400,000 (n/c)





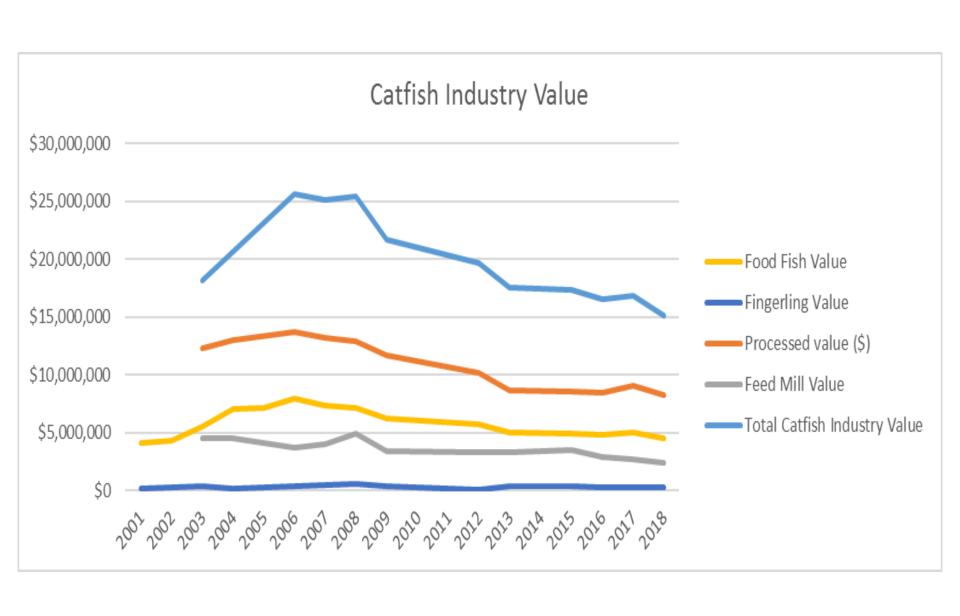
- Trends
 - -Decrease in production
 - -Imports and high feed costs
 - -Remains a major NC cultivar



Total Combined Value

Farm gate, processing, feed milling

* \$12,116,058 (-20.1%)



2018 NC Hybrid Striped Bass Industry

Food fish production

10 producers (n/c), 12 farms (n/c)

9 pond producers

1 tank producer

3,461,000 lbs. (+47.1%)

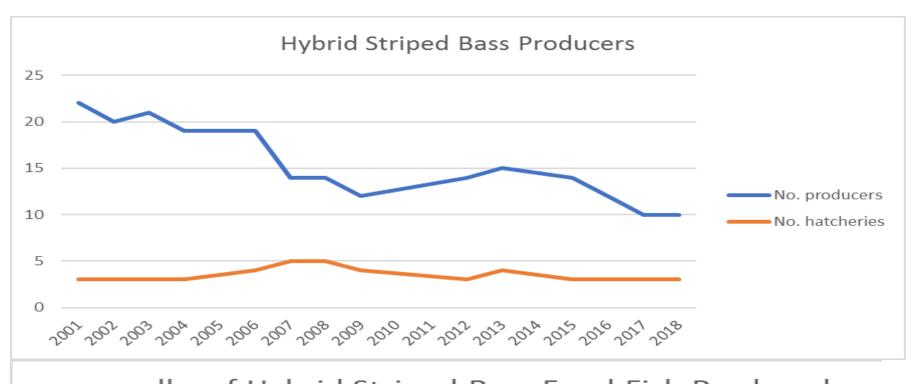
Markets

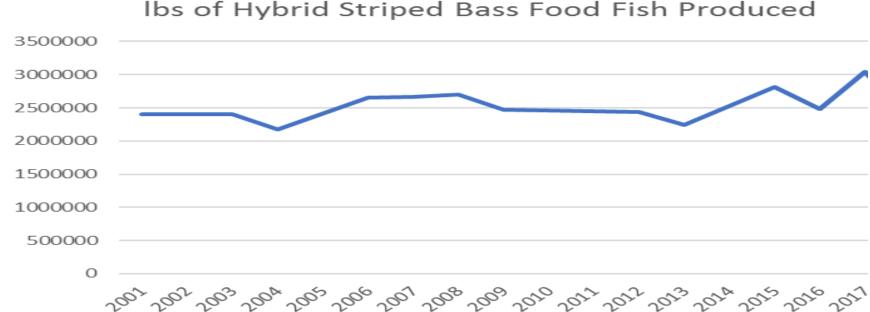
Live \$4.02 /lb. (-0.7%)

Box \$3.75 /lb. (-2%)



Farm gate= \$13,913,220 (+50.4%) *all major farms reporting!





2018 NC Hybrid Striped Bass Industry

Fingerling production 3 producers (n/c)

2,720,000 fingerlings (+74.3%) @ \$.25 each



TOTAL Farm gate value \$680,000 (+74.3%)

2018 NC Hybrid Striped Bass Industry

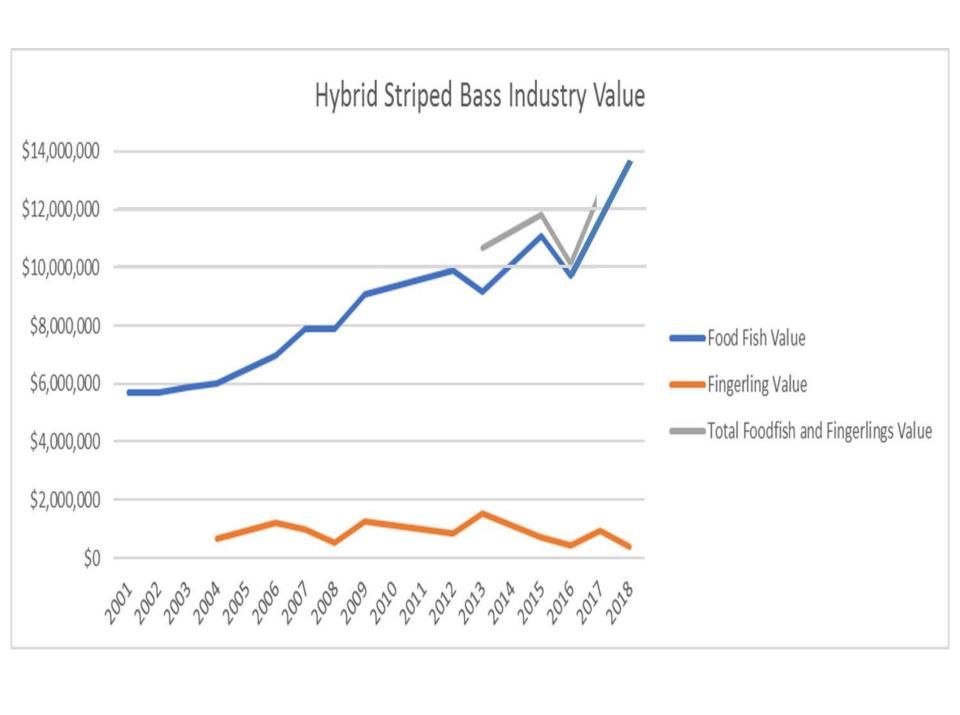
Trends

- Live market focused
- Diversity added with LMB on split live haul trips
- Farms increasing production to meet market opportunities
- Majority of this year's increase due to improved farm reporting



Total Combined Value

Food fish and fingerlings * \$14,593,220 (+51.4%)



2018 Largemouth Bass Industry

First Year Reported

2 Producers

130,000 lbs. Produced

\$6.50/lb.

Farm Gate Value= \$845,000





2018 North Carolina Tilapia Industry

Food fish production
 6 producers* (-3)
 Tank-based RAS

1,023,458 lbs. (-9.7%) \$2.46/ lb. (+0.4%)



Farm gate=

\$ 2,517,222 (-9.9%)

2018 North Carolina Tilapia Industry

Fingerling production
3 producers (n/c)
132,800 sold (-79.7%)
\$0.50 /fingerling (-10.7%)

Farm gate= \$ 66,000 (-81.8%)

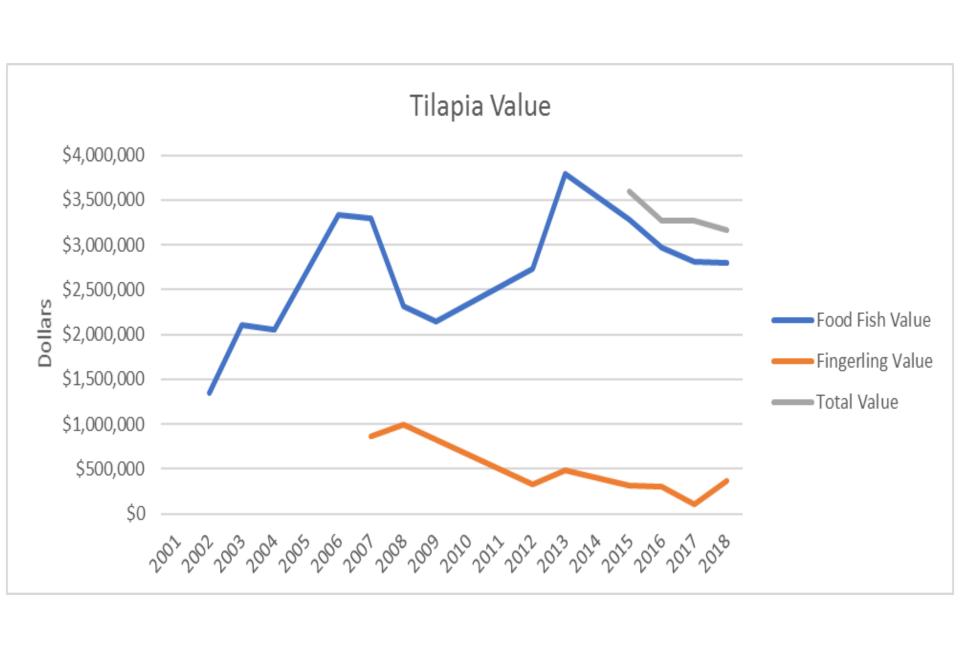


2018 North Carolina Tilapia Industry

- Fresh Keepers Cooperative
- Southern States no longer producing
- General Trends
 - Production decreased
 - Slight price increase
 - Fingerling production decrease
- Total Combined Value
 Food fish and fingerlings
 * \$ 2,583,222 (-18.2%)



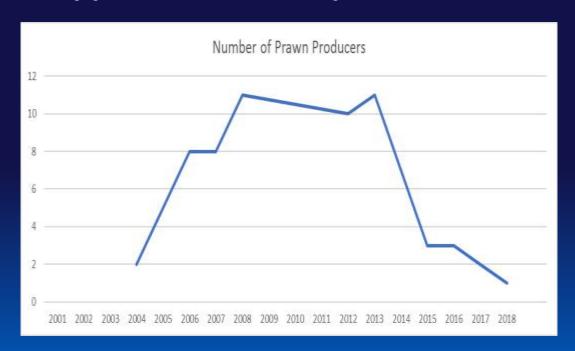




2018 NC Freshwater Prawn Industry

1 active producer

- Co-op no longer selling product
- Cheap imports have severally impacted markets
- Opportunities with pondside sales





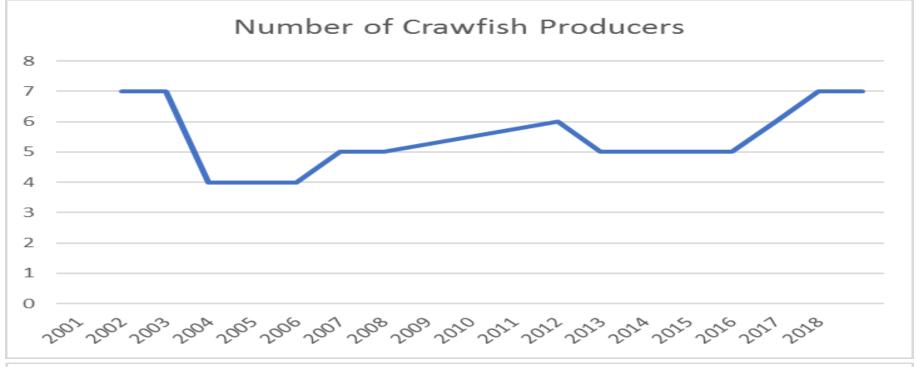


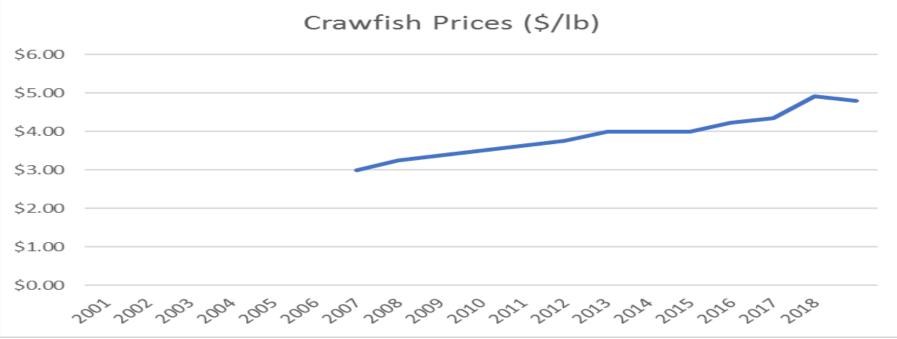
2018 North Carolina Crawfish Industry

- 7 active growers (n/c)
- 48 pond acres (+7.8%)
- 14,942 lbs. produced (-6.7%)
- \$4.80/lb.(wt. avg.)
- Farm gate=\$71,721 (-8.8%)
- -Winter freeze hurt production.
- -Anticipating another 5 producers (24.5 ac) for next year.









2018 North Carolina Sturgeon Production

- 2 production facilities
 - 1 owner
 - Marshallberg Farms:Marshallberg, NCHappy Valley, NC

- 2 species of sturgeon produced in NC:
 - Siberian
 - Russian





2018 North Carolina Sturgeon Production

Sturgeon production in NC is still in a start-up phase due to the maturation age required for these fish.

92% of the value of this production is from caviar and 8% from the meat.



More historical data to come!

- 1st year including trends and historical data...
- Still some kinks to work out...
- Hopeful to add insight and value to our data...
- Hope you enjoyed!



NCSU & NC Extension

-Harry Daniels: Freshwater Aquaculture Production

NC Sea Grant

-Chuck Weirich: Marine Aquaculture Production

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-Ron Fish: Aquaculture Industry Value & Resources

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NC Mariculture: Current products





Eastern oysters

Hard clams

NC Soft Crab Shedding Industry



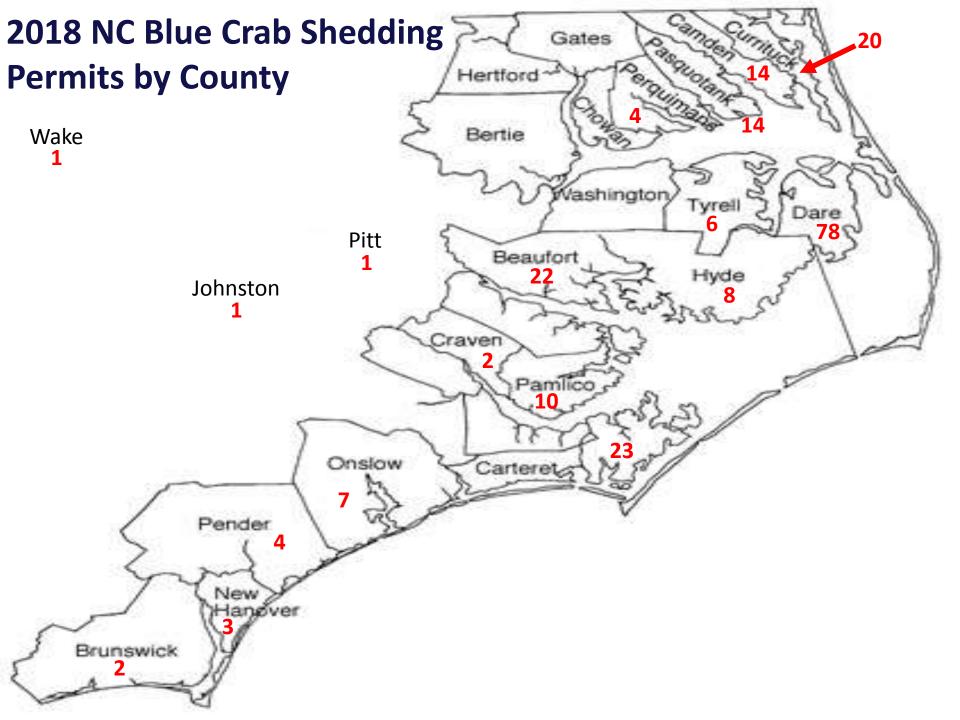






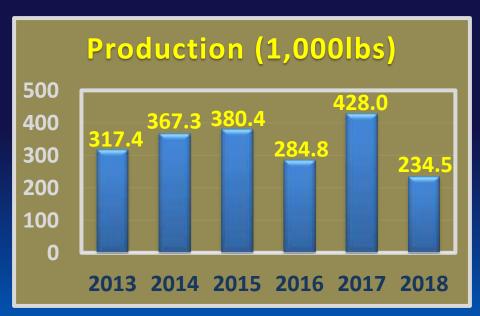
220 permits (- 16.7%)







234,500 lbs (- 45.2%) \$1.50 mill (- 51.6%)





NC soft crab industry trends and issues





Dependence on wild-caught peeler crabs – supply often limited and inconsistent



Spring weather in North Carolina.....







WNCT 9 ON YOUR SIDE

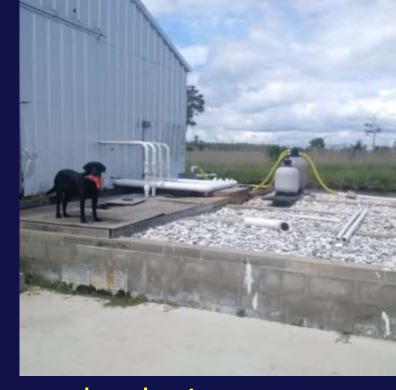


WNCT 9 ON YOUR SIDE



WNCT 9 ON YOUR





Increasing application of recirculating technologies









Strong but very volatile market





An option to supply peeler crabs?







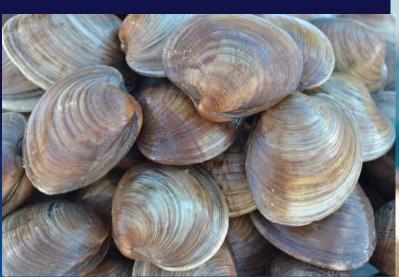




NC shellfish mariculture







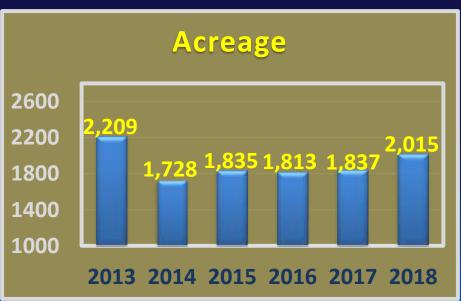


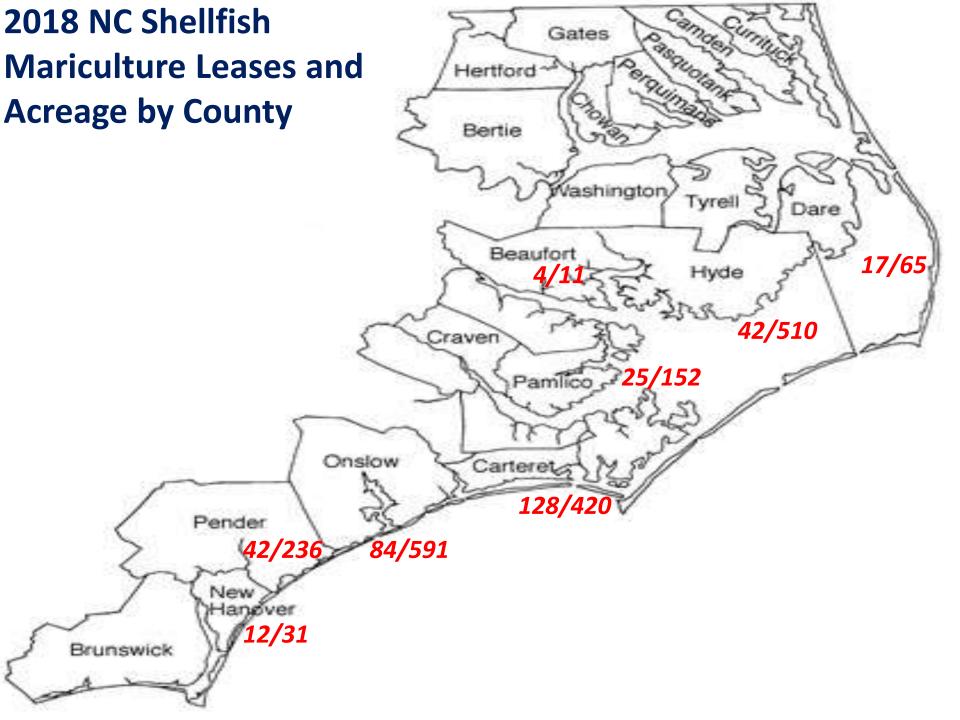
NC Shellfish Mariculture Status: 2018 Leases and Acreage

354 Leases (+ 27.3%)

2,015 Acres (+ 9.7%)

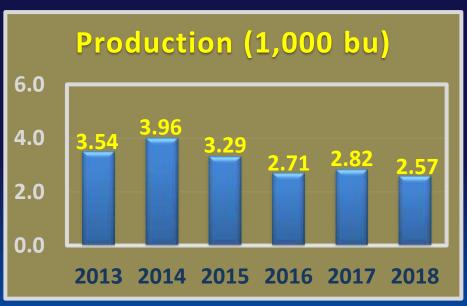








2,573 Bushels (- 8.9%) \$160,780 (- 15.8%)





Wild harvest: \$1.47 million



76,898 Bushels (- 0.9%)

\$2,068,637 (+ 6.5%)





Wild harvest: \$1.80 million

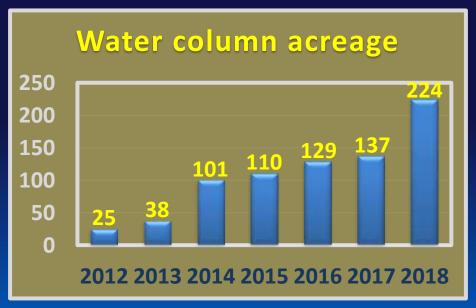


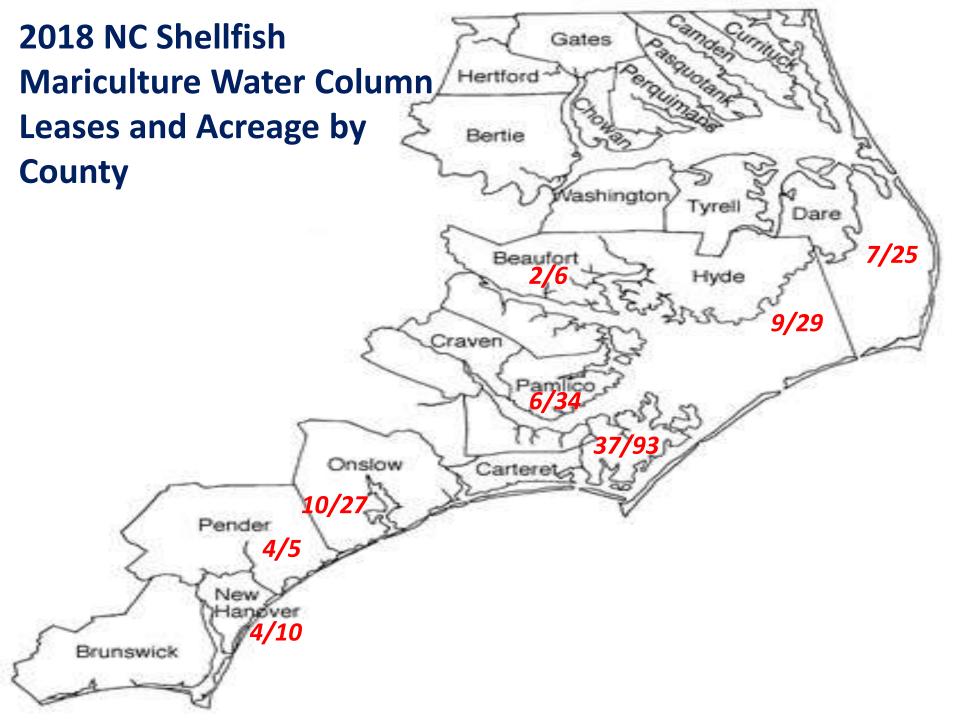
75 leases (+ 66.7%)

Water column leases

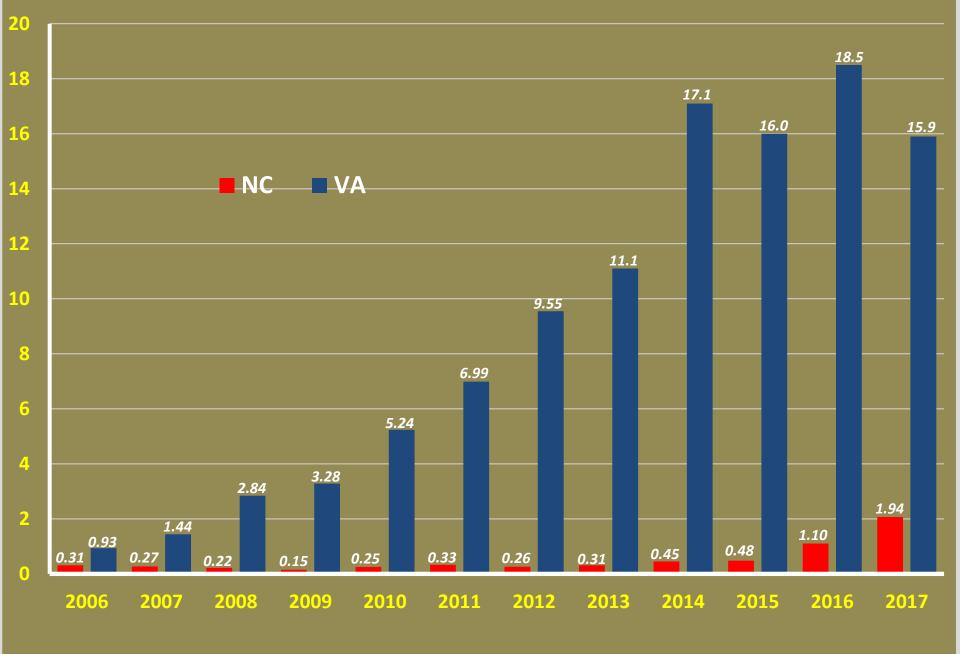
90
75
60
45
30
15
0
2012 2013 2014 2015 2016 2017 2018

224 acres (+ 63.5%)



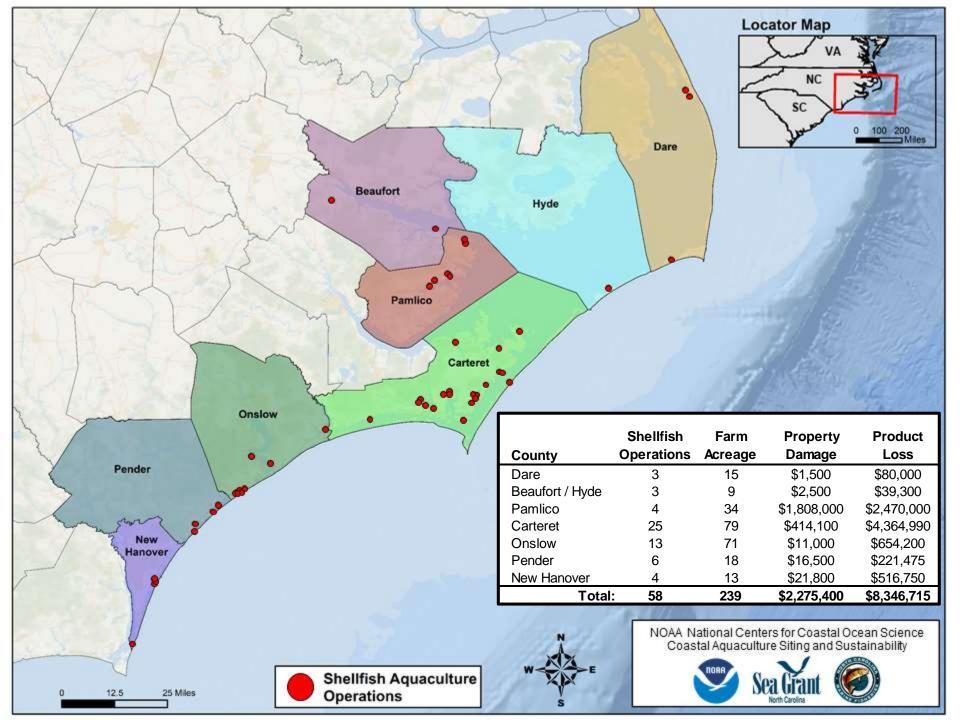


Farm Gate Farmed Oyster Value (millions USD)

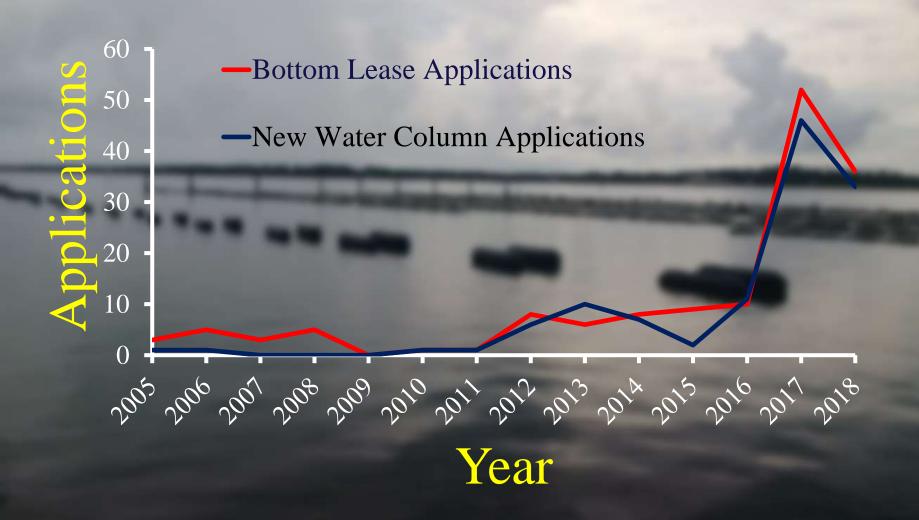


NC shellfish industry trends and issues





Oyster mariculture is on the rise Increasing water column production for half-shell market





Room to expand markets?

NC establishing great reputation

Product branding expanding



Entry into industry often difficult (leasing, start-up funding)





Lack of hands-on training opportunities





Disease management support



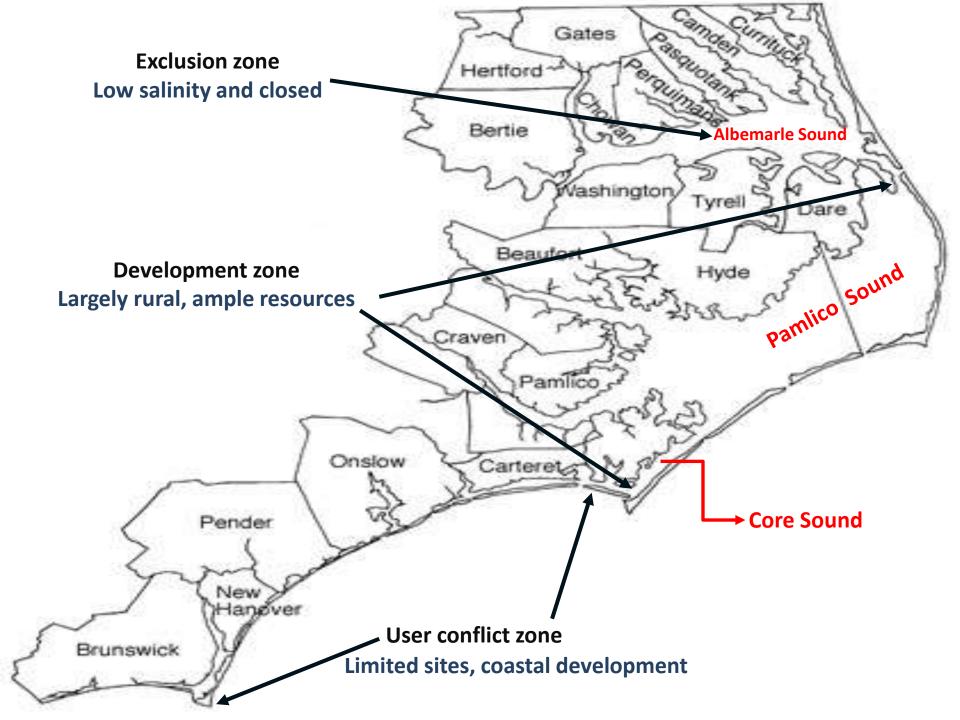
Seed availability



User conflict/NIMBY issues increasing







In 2017 the North Carolina General Assembly mandated that the UNC Research Policy Collaboratory to form an advisory committee to study and make recommendations to advance the shellfish mariculture industry in the State







North Carolina Shellfish Initiative











Announcing the Initiative August 2, 2018



North Carolina Shellfish Initiative

- Goal: Increase populations of bivalve shellfish in NC coastal waters through sustainable commercial production and restoration activities
- □ Four focus areas

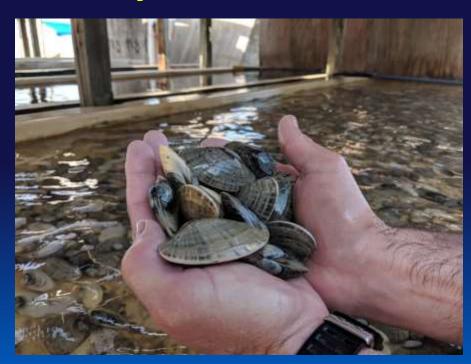






Sunray Venus clams









Bay Scallops



Aqua Plantations, LLC – black sea bass production







Marine Ornamentals









Macroalgae (Seaweed)









Thanks to Mike Graven, Amanda Tong, and Alan Bianchi of NCDMF for providing leasing and production data



chuck_weirich@ncsu.edu

NCSU & NC Extension

-Harry Daniels: Freshwater Aquaculture Production

NC Sea Grant

-Chuck Weirich: Marine Aquaculture Production

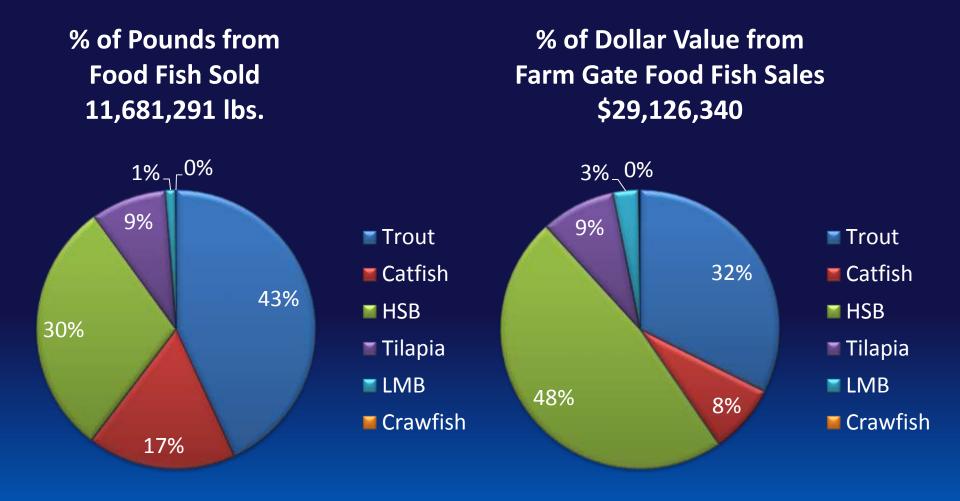
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2018 North Carolina Aquaculture Industry Value Summary - Freshwater Species (food fish)

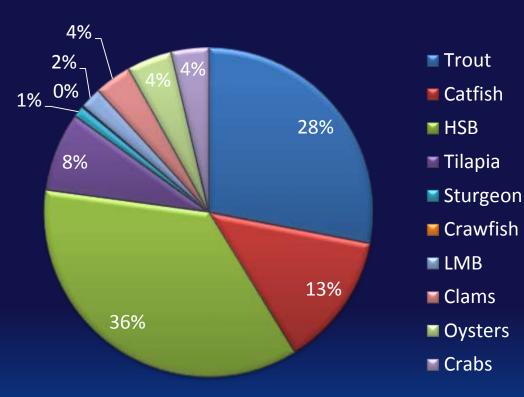


2018 North Carolina Aquaculture Industry Summary - All Except Processed Product

• Includes :

- Freshwater foodfish
- Marine species
- Fingerling production
- All farms
- Shellfish leases
- Crab shedding permit holders





Value= \$40,620,757 (+11%)

2018 NC Aquaculture Industry Summary

- Processors and product value
 - 4 processing facilities, 3 Trout, 1 Catfish (n/c)

Processed product value= \$18,973,481 (-5.04%)



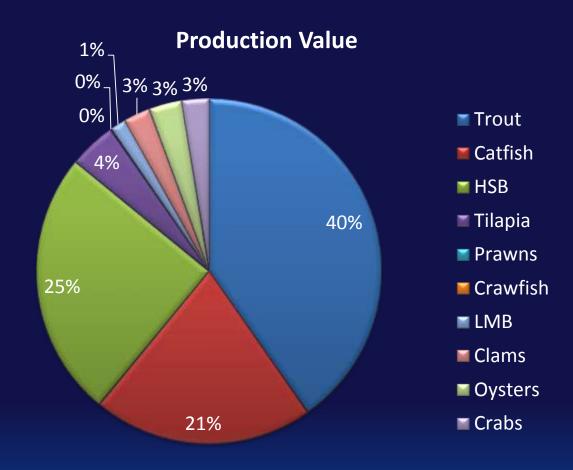


2018 NC Aquaculture Industry Summary

Total Value

Includes:

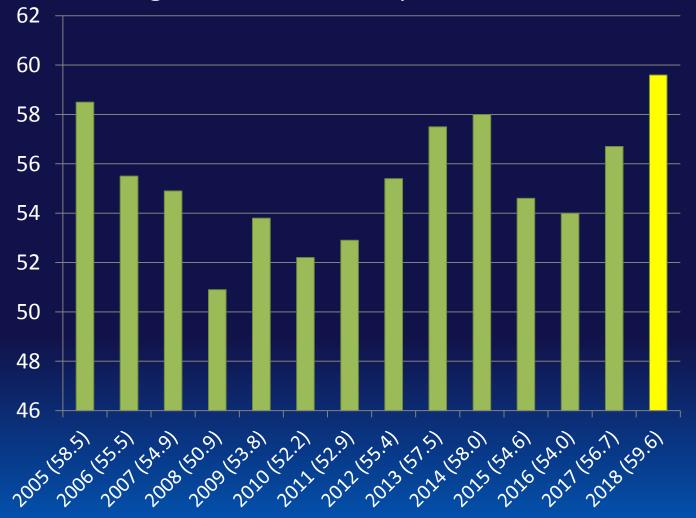
- -Production farm gate
- -Processed product
- -Feed produced



Value to NC = \$59,594,238 (+12.2%)

So how do we make it grow?

Total dollar value from the NC Aquaculture Industry according to NCADC State Update Presentations



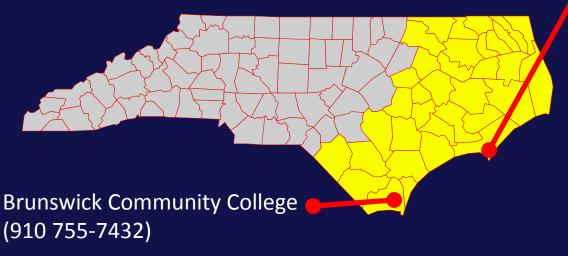
SO CLOSE TO 60 MIL!

What will the next 10 years hold?

What ways can we help it grow?

Aquaculture Education in North Carolina

NC Community College System





Carteret Community College (252 222-6114)





Aquaculture Research Personnel



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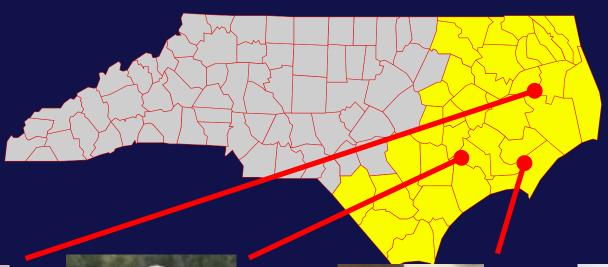






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Pete Anderson Aquaculture Consultant NCAA Representative (252) 633-1477

YOUR Aquaculture Associations – Join them!



